

CLAIMS

What is claimed is:

1. A frequency multiplexer for switching between frequency bands comprising:

5 a plurality of circuits, connected to a common terminal, wherein each of the circuits comprises:

a filter; and

a device connected to the filter,

wherein

10 the device has first and second states;

each circuit has a first filter characteristic that passes a first frequency band and substantially blocks a second frequency band when the device is in the first state; and

15 each circuit has a second filter characteristic which substantially blocks the first and second frequency bands when the device is in the second state, wherein the second filter characteristic is a result of the device and the filter acting in combination.

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2. The frequency multiplexer of claim 1 further comprising:

a controller that selectively places each said device in the first state or the second state, wherein
25 when one of the plurality of circuits is conducting signals of the first frequency band the controller places each remaining device of the plurality of circuits in the second state.

3. The frequency multiplexer of claim 2 wherein
30 the controller comprises a plurality of individual

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11. The frequency multiplexer of claim 1 wherein each filter comprises:

a second inductor connected in parallel with both the first inductor and the filter capacitor.

a first capacitor connected in series with a switch device, wherein the switch device and the first capacitor are connected in parallel with the first inductor.

14. The frequency multiplexer of claim 13 wherein each diode is a PIN diode.

16. A method for switching between frequency bands comprising the steps of:

25 selecting an active circuit from a plurality of
circuits,

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conducting a signal through the active circuit,
wherein the signal is of the first frequency band of the
active circuit.